



Pumping Service Report

9193395

Client Name Whiting Petroleum Corp.	Well Name Horsetail 19N-1924M	Rig Pioneer Drilling 54	Job Date August 03,2014	Call Sheet 1045036
Client Representative BJ	Surface Well Location SW SE Sec 19:T10N:R57W	Down Hole Well Location	Job Type Surface Casing	

Well Profile

Well Type:	Oil
Maximum Treating Pressure (psi):	---
Predicted Bottom Hole Static Temperature (°F):	--- @ --
Bottom Hole Circulating Temperature (°F):	--- @ --
Bottom Hole Logged Temperature (°F):	--- @ --

Open Hole

Size (in)	Excess (%)	TMD From (ft)	TMD To (ft)	TVD From (ft)	TVD To (ft)
13.500	25.000	0.000	1,550.000	--	--

Casing

Size	Weight	Grade	Collapse Pressure	Internal Yield Pressure	Capacity	I.D.	O.D.	Depth From	Depth To
(in)	(lb/ft)		(psi)	(psi)	(bbl)	(in)	(in)	(ft)	(ft)
9.625	36.000	J-55	2,020.0	3,520.0	120.76	8.921	10.625	0.0	1,562.0

Products

Stage 1

From Depth (ft):

To Depth (ft):

Acids/Blends/Fluids :

Tail: 665 Sacks of 0:1:0 Type III, Density = 14.2 lb/gal, Volume Pumped = 174.1 (bbl)
Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 60
+ 1 % of CaCl₂ (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend)

Extra Cement: 100 Sacks of 0:1:0 Type III, Density = 14.2 lb/gal, Volume Pumped = 26.2 (bbl)
Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 60
+ 2 % of CaCl₂ (Prehydrate)

Fluid & Cement Data

Expected Cement Top: Surface

Wellbore Fluid

Fluid Type	Viscosity (cP)	Density (lbs/gal)	Yield Point (psi)	Temperature (°F)	Recorded@
Water	--	8.400	--	--	Jul 14, 2014 20:27

Attachment & Tools

Down Hole Tools

Tool Type	Depth (ft)	Supplier
Guide Shoe	--	Third Party
Float Collar	--	Third Party

Tubular Plugs

Tubular Plug Type	Size (in)	Supplier
Rubber Top	9.625	Client



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Units & Personnel

Units

<u>Truck Unit No.</u>	<u>Main Type</u>	<u>Sub Type</u>	<u>Tractor Unit No.</u>	<u>Main Type</u>	<u>Sub Type</u>	<u>Time On Location</u>	<u>Time Off Location</u>
201173	PICKUP	1 Ton	449095	TRAILER	Utility Trailer	08/03/2014 18:00	08/04/2014 06:00
445070	TRAILER	SCM Twin	745070	TRACTOR	Tandem - Tractor	08/03/2014 18:00	08/04/2014 06:00
201173	PICKUP	1 Ton				08/03/2014 18:00	08/04/2014 06:00

Crew and Bonuses

<u>Employee</u>	<u>Start Shift</u>	<u>End Shift</u>	<u>Second Start Shift</u>	<u>Second End Shift</u>
Maguire, Matthew	08/03/2014 18:00	08/04/2014 06:00		
Morris, Theodore	08/03/2014 18:00	08/04/2014 06:00		
Daylong, Eric	08/03/2014 18:00	08/04/2014 06:00		
Leue, David	08/03/2014 18:00	08/04/2014 06:00		
Meisner, Jeremy	08/03/2014 18:00	08/04/2014 06:00		

Treatment Reports & Remarks



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Treatment Report

Event #	Event Time	Event Description	Fluid Type	Rate (bbl/min)	Tubular Pressure (psi)	Annular Pressure (psi)	Stage Volume (bbl)	Total Volume (bbl)
1	Aug 03,2014 18:00	Arrive On Location		--	--	--	--	0.00
2	Aug 03,2014 23:30	Tailgate Meeting		--	--	--	--	0.00
3	Aug 04,2014 00:30	Rig In		--	--	--	--	0.00
4	Aug 04,2014 01:30	Safety Meeting		--	--	--	--	0.00
5	Aug 04,2014 01:45	Sign-off on Safety		--	--	--	--	0.00
6	Aug 04,2014 01:59	Start - Fluid	Water	3.50	50.0	--	2.00	2.00
		Remarks: Filled lines.						
7	Aug 04,2014 02:00	Pressure Test Lines		--	3,000.0	--	--	2.00
		Remarks: All lines held pressure.						
8	Aug 04,2014 02:10	Pump	Water	4.00	70.0	--	20.00	22.00
		Remarks: Fresh ahead.						
9	Aug 04,2014 02:23	Mix Cement	0:1:0 Type III	4.00	200.0	--	174.10	196.10
10	Aug 04,2014 03:02	Stop		--	--	--	--	196.10
11	Aug 04,2014 03:03	Drop Plug		--	--	--	--	196.10
12	Aug 04,2014 03:04	Displace Fluid		6.50	680.0	--	113.00	309.10
		Remarks: 2 bbls/min @ 105 bbls away @ 680 psi.						
13	Aug 04,2014 03:44	Bump Plug		--	1,390.0	--	--	309.10
14	Aug 04,2014 03:44	Hold Pressure		--	1,390.0	--	--	309.10
		Remarks: Hold pressure for 2 minutes.						
15	Aug 04,2014 03:46	Stop		--	1,347.0	--	--	309.10
		Remarks: Bleed back, 1 bbl back.						
16	Aug 04,2014 03:47	Stop		--	--	--	--	309.10
17	Aug 04,2014 04:10	Wash	Water	1.50	100.0	--	20.00	309.10
18	Aug 04,2014 04:55	Rig Out		--	--	--	--	309.10
19	Aug 04,2014 05:20	Pre-Departure Meeting		--	--	--	--	309.10
20	Aug 04,2014 05:25	Job Complete		--	--	--	--	309.10
21	Aug 04,2014 05:29	Leave Location		--	--	--	--	309.10

Did Float Hold: Yes
Fluid Returns : Yes
Type : Cement
Volume (bbl) : 63
Temperature (°F) : 60
FDAS Functioning Correctly : Yes
Was the Program Followed As Per Design? : Yes

Material Transfer Sheet Number

Material Transfer Sheet Number
9804
9805



Client	Whiting Petroleum Corporation	Client Rep	Mr. Matt Taylor	Supervisor	Matthew Maguire
Ticket No.	9193395	Well Name	Horsetail 19N-1924M	Unit No.	745070
Location	SW SE Sec 19:T10N:R57W	Job Type	Surface Casing	Service District	505
Comments	Fill lines w/ 2 bbls water, PT 3000psi, 20 bbls fresh ahead, 665 sacks 0-1-0 Type III cement, (WR = 7.36, Y = 1.47, D = 14.2, Sk Wt = 95.0) 174.1 bbls slurry @ 14.2 density, (116.5 bbls mix water) 117.3 bbls displacement, (slow rate to 2 bbls/minute last 10 bbls, bump plug 500psi over, hold pressure 1 minute, bleed back, stop.			Job Date	08/04/2014

